

Notice of Allowability

Application No.

10/051,176

Examiner

Daniel E Valencia

Applicant(s)

DUCELLIER ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed July 28, 2003.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ The drawings filed on 22 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____ | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

DETAILED ACTION

Applicant's communication filed on July 28, 2003 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. All of applicant's claims are now allowable.

Allowable Subject Matter

Claims 1-13 are allowed.

The following is an examiner's statement of reasons for allowance: As to independent claim 1, the prior art alone or in combination fails to disclose or render obvious a fiber optic wavelength switch comprising: (a) a front-end unit having an input port and a plurality of output ports, said front-end unit comprising: (i) a fiber array comprising a plurality of fibers coupled to the input port and the plurality of output ports for transmitting and receiving optical signals, respectively; (ii) a micro-lens array having a plurality of micro-lenses, each micro-lens being coupled to a respective fiber; and (iii) a lens for receiving and re-directing the optical signals from the micro-lens array; (b) a wavelength dispersion element defining a dispersion plane for dispersing an input optical signal from the input port into a plurality of sub-beams with different central wavelengths; (c) a spherical reflector for redirecting the input optical signal launched from the input port to the wavelength dispersion element, and for redirecting the sub-

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beams from the wavelength dispersion element back along spatially separated parallel paths; and (d) an actuation array for redirecting a selected plurality of sub-beams back to the spherical reflector in a plane substantially perpendicular to the dispersion plane defined by the wavelength dispersion element; whereby the selected plurality of sub-beams are redirected by the spherical reflector back to the wavelength dispersion element for recombination into a recombined output beam, which is redirected via the spherical reflector to one of the output ports. The claimed invention is patentably distinct from the closest prior art (Mikes et al.), because the invention is limited to a device that utilizes only one reflective redirecting element for directing the optical signal to from the front end to the dispersive element, from the dispersive element to the actuation array, from the actuation array back to the dispersive element and from the dispersive element back to the front end unit. The Mikes reference functions in a similar manner, but uses two redirecting elements (fig. 3, ref 330 and 350).

Likewise, claims 8 and 12 require a single reflective redirecting element and therefore a beyond the scope of the Mikes reference. Claims 8 and 12 are patentably distinct for the same reason.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tomlinson U.S. 2002/0067887 A1 discloses a dynamic gain-flattening filter using a spherical reflector, but is NOT applicable as prior art, because it is commonly owned.

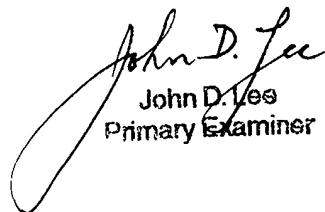
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E Valencia whose telephone number is (703)-305-4399. The examiner can normally be reached on Monday-Friday 9:30-6:00.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



DEV



John D. Lee
Primary Examiner